PROCEEDINGS

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DESCRIPTIONS OF SIX NEW SUBSPECIES OF AMERICAN BIRDS.

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In the course of our work we have discovered the following new subspecies of American birds:

Geranospiza caerulescens livens, subsp. nov.

Type.—M. C. Z., 224,793, adult ♀, parent of eggs; Northwestern Mexico: Alamos, State of Sonora, 9 February, 1888; M. Abbott Frazar.

Subspecific characters.—Similar to Geranospiza caerulescens niger (Du Bus), and of about the same size, but much paler, not blackish, between neutral gray and deep neutral gray of Ridgway; larger than Geranospiza caerulescens caerulescens (Vieillot), and darker, being intermediate in coloration between G. c. caerulescens and G. c. niger.

Measurements (in millimeters) -

(2,				Culmen
Sex	Wing	Tail	Tarsus	$from\ cere$
M. C. Z. 224,793 (type) 9	349.0	242.0	97.0	22.0
" 224,792	334.0	233.0	91.0	broken

Specimens examined.—

G. c. livens, two:—N. W. Mexico: Sonora, 1♂, 1♀.

G. c. niger, seven:—Mexico: Tampico, 1 ♀; Vera Cruz, 1 ♂. Costa Rica: Tenorio, 1 ♀; Boruca, 1 ♂; Bolson, 2 ♀♀. Panama: Dival, 1 ♂.

G. c. caerulescens, three: "Brazil," 1 Q. Surinam, 1 3, 1 Q.

So far as we are aware, no bird of this genus has ever before been recorded from any locality so far northwest as Sonora. Both specimens, probably a pair, were collected at Alamos by Frazar on the same day.

Otus choliba luctisonus, subsp. nov.

Type.—M. C. Z., 116,530, adult ♂; Costa Rica: Escazu, 26 November, 1900.

Subspecific characters.—Similar to Otus choliba crucigerus (Spix) of the Amazon River Region, and of about the same size, but upper parts paler,

the dark central markings, above and below, much narrower, especially on the breast.

Measurements.— Type, adult σ : wing, 167.5; tail, 90.5; tarsus, 30.5; culmen from eere, 14.2.

Specimens examined.—

- O. c. luctisonus, ten:—Costa Rica, 2; Panama: Divala, 1; Pearl Islands, 7.
- O. c. crucigerus, nine: Surinam, 8; Cayenne (tradeskin), 1.

We have not seen specimens from the type locality of *crucigerus*, but assume that the Surinam bird is sufficiently close for comparison. The difference in coloration between the two forms is very decided. All the specimens we have examined are in the brown phase.

Mecocerculus leucophrys roraimae, subsp. nov.

Type.—M. C. Z., 83,090 (coll. T. E. P., 2009), adult ♀; British Guiana: Mount Roraima, 24 August, 1883; Henry Whitely.

Subspecific characters.—Similar to Mecocerculus leucophrys nigriceps Chapman, and of about the same size, but upper parts much darker, more olive-brownish, less olive-greenish; similar also to Mecocerculus leucophrys setophagoides (Bonaparte), but much smaller, and upper parts slightly darker.

Measurements.—Type, adult ♀: wing, 59.0; tail, 58.5; tarsus, 19.0; exposed culmen, 9.0.

Specimens examined.—

M. l. roraimae, one:— the type.

- M. l. nigriceps Chapm., thirty:—Venezuela: Las Palmales, 1 ♂ (the type); Paramo de Rosas, 4; State of Lara, 6; Merida, 3. Colombia: Santa Marta region, 16 (including the type of Myiopatis montensis Bangs).
- M. l. setophagoides (Bonap.), thirteen:—Colombia: Las Ventanas (Santander), 10; Bogotá, tradeskin, 1; unspecified, 2.

M. l. leucophrys (Lafr. and d'Urb.), one:—Bolivia.

? M. l. notatus Todd, two:—Colombia: Huila, Valle de las Pappas, Central Andes, 1,000 ft., 1 $_{\circlearrowleft}$, 1 $_{\circlearrowleft}$.

Hartert and Goodson (Nov. Zool., XXIV, 1917, p. 494) have called attention to two specimens from Roraima, which are as small as $M.\ l.$ nigriceps, but dark above as $M.\ l.$ setophagoides. They state that the Guiana specimens in the British Museum agree with those in Tring. Our own specimen showing these same characters, we have not hesitated to separate the Guiana form.

We are indebted to Dr. Frank M. Chapman and Mr. W. E. Clyde Todd for the loan of a good series of skins.

Nuttallornis borealis majorinus, subsp. nov.

Type.—M. C. Z., 55,371, adult ♂; Pine Flats, north fork of San Gabriel River, Los Angeles County, California, 19 July, 1905; C. H. Richardson, Jr. Subspecific characters.—Similar to Nuttallornis borealis borealis of eastern

North America, but larger; under parts averaging darker, i. e., more dusky and less white.

Measurements .-

N. b. majorinus.—Type, adult ♂: wing, 115.0; tail, 76.0; tarsus, 15.0; exposed culmen, 18.5.

Eighteen males: wing, 111.3 (107.0-116.5); tail, 72.8 (70.0-77.0); tarsus, 14.9 (14.5-15.0); exposed culmen, 18.6 (18.0-20.0).

Twenty females: wing, 104.8 (100.5–109.0); tail, 68.9 (66.0–74.0); tarsus, 14.4 (13.5–15.0); exposed culmen, 17.4 (16.5–18.5).

N. b. borealis.—Nineteen males: wing, 105.6 (103.0-109.0); tail, 67.5 (64.0-70.0); tarsus, 14.2 (13.5-15.0); exposed culmen, 17.0 (16.0-18.0).

Nine females: wing, 99.4 (96.0–102.5); tail, 64.3 (61.0–67.0); tarsus, 13.9 (13.5–14.5); exposed culmen, 16.6 (16.0–17.5).

Specimens examined.—

N. b. majorinus, forty-four;—Montana, 1; Oregon, 3; Colorado, 11; California, 16; Arizona, 11; Mexico: Chihuahua, 1 ♀ (migrant—wing 110, perhaps a male); Colombia: La Concepcion, 1 ♀ (migrant—wing, 111.0, probably a male).

N. b. borealis, forty-five:—Maine, 14; New Hampshire, 4; Massachusetts, 7; Michigan, 2; New York, 2; North Carolina, 1 % (migrant); Texas: Lomita Ranch, 1 % (migrant); Mexico: Tamaulipas, 8 % %,

2 9 9 (migrant); Costa Rica, 3 of of (migrant); Panama: Boquite. 1 of (migrant).

In coloration the new form is practically identical with true borealis except that the underparts have a little less white. This character is far from constant, but in our series is noticeable. In size, however, the two forms are sufficiently distinct to enable us to trace their migration routes, provided the sexing is reliable.

The Peruvian specimens recorded by Taczanowski (Orn. Perou, II, 1884, p. 317—wing, 113; tail, 74) and by Hellmayr (Archiv für Naturgesch., 85 Jahrg., 1920, Abt. A, Heft 10, p. 60—adult $\, Q \,$, wing, 103; tail, 74) belong without doubt to the western form.

Melanotis caerulescens effuticius, subsp. nov.

Type.—M. C. Z., 220,386, adult ♂; Mexico: Chihuahua, Hacienda de San Rafael, 4 May, 1888; M. Abbott Frazar.

Subspecific characters.—Similar to Melanotis caerulescens caerulescens (Swainson) of eastern Mexico, and of about the same size, but averaging paler bluish, less grayish blue, throughout; pileum, superciliary region, throat, and chest, paler, brighter bluish.

Measurements.—Type, adult \mathfrak{G} : wing, 115.0; tail, 125.0; tarsus, 30.0; exposed culmen, 22.5.

Specimens examined.—

M. c. effuticius, twenty-two:—Northwestern Mexico: Alamos (Sonora),
4; Chihuahua, 14; Los Flores (Sinaloa), 1; Escuinapa (Sinaloa),
1; Santiago (Tepic), 2.

M. c. caerulescens, twelve:—Eastern Mexico: Jalapa (Vera Cruz), 4; Orizaba (Vera Cruz), 3; Texolo (Vera Cruz), 4; "Mexico," 1.

We find that the palest birds are from Chihuahua (Cf. Ridgway, Birds of North and Middle America, Pt. 4, 1907, p. 211). A specimen from Escuinapa is intermediate. One bird in three from Texolo also approaches the western bird in coloration. This specimen probably represents an extreme variant of the eastern form, but is not nearly so pale as an extreme example of the northwestern form.

Females of both forms are duller than males, and immature birds are much duller and more brownish.

Tangara viridissima toddi, subsp. nov.

Type.—M. C. Z., 106,342, adult ♂; Colombia: San Francisco, Santa Marta Mountains, 7 February, 1899; W. W. Brown, Jr.

Subspecific characters.—Similar to Tangara viridissima viridissima (Lafresnaye)¹ of Trinidad, but, in fully adult plumage, head paler chestnut and underparts shining Scheele's Green of Ridgway, without any marked bluish tint.

Measurements.—Type, adult σ : wing, 73.5; tail, 49.0; tarsus, 16.5; exposed culmen, 10.0.

Specimens examined.—

T. v. toddi, forty:—Colombia: Santa Marta Mountains.

T. v. viridissima, eight:—Trinidad, 6: Venezuela: Yacua, 2.

Mr. W. E. Clyde Todd, who has examined a large series of this species in connection with the preparation of his forthcoming paper on the birds of the Santa Marta region, informs us that birds from some parts of Venezuela are apparently intermediate.

We take great pleasure in naming this excellent form in honor of Mr. Todd, in recognition of his work on the birds of this region.

¹Tangara viridissima (Lafr.) replaces Tangara desmaresti (Gray), preoccupied. Cf. Hellmayr, Verh. Orn. Gesellsch., Bayern, XIV, Heft 4, 1920, p. 283.